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Rejection Under 35 U.S.C. 102

Claims 15, 16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,618,388 issued to Yip et al. on September 9, 2003. The Office Action states that Yip et al. discloses all of the elements of applicant's claims.

This ground of rejection is respectfully traversed for the following reason.

Applicant notes that, generally, he previously stated that, notwithstanding the Office Action's assertion to the contrary, Yip et al. does not disclose a memory for establishing a correspondence association between addresses within a local area Ethernet network and addresses of ports in the metropolitan area Ethernet network, as required by applicant's claim 15. Instead, there is no mention of ports whatsoever in Yip et al. Furthermore, even if the notion of ports is implied by the fact that there is a metropolitan area network in Yip et al., nevertheless, there is no teaching or implication of a memory that is for establishing a correspondence association between addresses within at least one local area Ethernet network and addresses of ports in the metropolitan area Ethernet network, as required by applicant's claim 15.

Indeed, rather than using associations between ports of the edge switches and addresses in a local area network, Yip et al. relates to a virtual metropolitan area network (VMAN) that segregates user traffic using VMAN tags. At the edge switch of the metropolitan area network to which a packet is routed the additional VMAN tags that have been added to the packet are stripped off. Thus, applicant's claim 15 is allowable over Yip et al. under 35 U.S.C. 102. Since claims 16 and 18-20 depend from, and hence include all the limitations of, claim 15, they too are allowable over Yip et al. under 35 U.S.C. 102.

In response, the present Office Action stated that "it is inherent that the edge switch should have ports with memory, where packets are queued before transmission, so that incoming data from the input port are channeled to the specific output ports after performing a look-up in a switching or routing table".

Applicants believe that the Office Action's statements are irrelevant to applicant's invention as claimed, even assuming the Office Action to be correct. In this regard, applicant notes that the memory of the ports mentioned by the Office Action is irrelevant

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to applicant's claim, as such memory would only serve the purpose, as pointed out by the Office Action, to temporarily store packets for transmission. Thus, the only possible element stated by the Office Action that might correspond to applicant's memory is the Office Action's proposed switching or routing table.

However, such a table would merely associate each particular destination address with a particular output port of the switch that connects in the direction of that destination address. For example, such a routing table would indicate that a packet arriving at the switch and destined for address A should be output at port A of the switch. It is important, however, to keep in mind that such addresses are addresses within the particular network through which the packet is traveling. Thus, the addresses of the routing table in a LAN are only LAN addresses while the addresses in the routing table in WAN are WAN address. Consequently, the association of destination address and port in the routing table mentioned by the Office Action are not the correspondence association between addresses within a local area Ethernet network and addresses of ports in a metropolitan area Ethernet network, as required by applicant's invention. In conventional routing tables there is no association between addresses within a local area Ethernet network and addresses of ports in the metropolitan area Ethernet network.

Since the Office Action admits that there is no association between addresses with a local area Ethernet network and address of those ports in the metropolitan area Ethernet network, and merely relies on the inaccuracy of conventional routing tables to provide that element, and since applicant has shown that a conventional routing table that might be employed by Yip et al. has no such association, therefore, applicant's claims are allowable over Yip et al. under 35 U.S.C. 102.

Rejection Under 35 U.S.C. 103(a)

Claims 1-14, 28-31 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,807,172 issued to Levenson et al. on October 19, 2004 in view of Yip et al.

This ground of rejection is respectfully traversed for the following reasons.

The Office Action states that Levenson et al. does not teach the encapsulation of Ethernet packets, as required by applicant's claims, and applicant agrees that it does not.

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To supply this encapsulation element, the Office Action cites Yip et al. However, Yip et al. is unable to supply the encapsulation element of applicant's claims.

Applicant previously stated that applicant and Yip et al. teach different things with the use of the term "encapsulating". In response, the Office Action states that "in telecommunication, encapsulation is defined as the inclusion of one data structure within another structure and the process". This requirement is met, according to the Office Action, by the addition of the VMAN tag to the input frame.

Assuming for argument sake, that applicant agrees to the Office Action's definition that encapsulation is defined as the inclusion of one data structure within another structure", the language of applicant's claims is not met by Yip et al. when all of the words of applicant's claims are taken into account.

Applicant's claim 1 requires encapsulating the contents of a first Ethernet packet received at a port of a switch of a metropolitan area Ethernet network in at least one encapsulating Ethernet packet. Thus, there is a first Ethernet packet, and its contents must be, in their entirety, per the Office Action's definition, included within at least a second other such Ethernet packet, the encapsulating Ethernet packet. One must keep in mind that any mere type of encapsulation will not meet the requirement of applicant's claims. It must be the same type of encapsulation specified by applicant. In other words, the contents of the whole first Ethernet packet must be contained in one Ethernet packet, or the contents of the whole first Ethernet packet must be divided up so that each resulting section is contained within an entire Ethernet packet. As a result, there now must be at least two source addresses, the original one of the first Ethernet packet and a new one for the encapsulating Ethernet packet, and there must likewise be at least two destination addresses, the original one of the first Ethernet packet and new one for the encapsulating Ethernet packet. Of course, the old source address and the old destination addresses are included within the payload portion of the new Ethernet packet.

In Yip et al., however, there is no teaching of Ethernet-in-Ethernet encapsulation even according to the Office Action's own proposed definition of encapsulating. There is no second packet that encapsulates a first packet, i.e., according to the Office Action's definition, there is no teaching of including a first packet within a second packet. Instead,

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what actually is taught in Yip et al. is that the original packet is merely modified with the inclusion of the VMAN tag. (See Yip et al., FIG. 2 and its associated description, i.e., column 4, line 49 through column 5, line 42 and especially column 5, lines 34-42, and FIG. 3 and its associated description, column 5, line 42 through column 6, line 11.) Thus, while there is an addition to the original packet, there is no teaching of including a first packet within a second packet, as is required by applicant's claim language and the definition suggested by the Office Action. In other words, the first packet is not contained within a second packet. Instead, in direct opposition to the language of applicant's claims, it is the VMAN tag that is encapsulated within the first packet. However, the VMAN tag is not an Ethernet packet. Thus, even if one views adding the VMAN tag as a form of encapsulation generally, this type of encapsulation is fundamentally different from the encapsulation described in applicant's claim, and it is clearly not the Ethernet packet within Ethernet packet encapsulation required by applicant's claim.

Clearly then, it can be seen that applicant is using the word "encapsulation" in accordance with its general meaning, but Yip et al., is using the word "encapsulation" in accordance with its own specific meaning as explained in the Yip et al. specification, which is not the same as, or in accordance with, the definition proposed by the Office Action.

Thus, even without importing any content from applicant's specification into the claim, but instead simply making sure to factor in all of the words of applicant's claim, even using the definition of encapsulation suggested by the Office Action, Yip et al. does not teach encapsulation of Ethernet packets within Ethernet packet, as recited in applicant's claims 1-14, 28-31 and 33-38. Likewise, Levenson et al. does not teach encapsulation of Ethernet packets either. Thus, the combination of Yip et al. and Levenson et al. cannot teach encapsulation of Ethernet packets. Since applicant's claims 1-14, 28-31 and 33-38 require encapsulation of Ethernet packets, the Yip et al. and Levenson et al. cannot make applicant's claims obvious under 35 U.S.C. 103.

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The foregoing applies to claims 22-24 and 25-27, which require the same type of encapsulation as does claims 1-14, 28-31 and 33-38 and which does not exist in the combination of Levenson et al. and Yip et al.

Thus, applicant's claims 22-24 and 25-27 are allowable over the combination of Levenson et al. and Yip et al. under 35 U.S.C. 103.

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, he is invited to call applicant's attorney so that arrangements may be made to discuss and resolve any such issues.

In the event that an extension of time is required for this amendment to be considered timely, and a petition therefor does not otherwise accompany this amendment, any necessary extension of time is hereby petitioned for, and the Commissioner is authorized to charge the appropriate cost of such petition to the Lucent Technologies Deposit Account No. 12-2325.

Respectfully,

Ilija Hadzic

By Eugene J. Rosenthal  
Eugene J. Rosenthal, Attorney  
Reg. No. 36,658  
732-949-1857

Lucent Technologies Inc.

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